



*Commonwealth of Virginia*

***VIRGINIA DEPARTMENT OF ENVIRONMENTAL QUALITY***

SOUTHWEST REGIONAL OFFICE  
355-A Deadmore Street, Abingdon, Virginia 24210  
(276) 676-4800 FAX (804) 698-4178

[www.deq.virginia.gov](http://www.deq.virginia.gov)

Travis A. Voyles  
Acting Secretary of Natural and Historic Resources

Michael S. Rolband, PE, PWD, PWS Emeritus  
Director  
(804) 698-4020

Jeffrey Hurst  
Regional Director

April 27, 2022

Mr. Thomas Fabrie  
CFO, Operations and Maintenance Planning  
INGENCO Wholesale Power, LLC  
2250 Dabney Road  
Richmond, Virginia 23230

Location: Chesterfield County, Virginia  
Registration No.: 52037

Dear Mr. Fabrie:

Attached is a renewal Title V permit to operate your facility pursuant to 9VAC5 Chapter 80 Article 1 of the Virginia Regulations for the Control and Abatement of Air Pollution. The attached permit will be in effect beginning October 17, 2022.

In the course of evaluating the application and arriving at a final decision to issue this permit, the Department of Environmental Quality (DEQ) deemed the application complete on January 28, 2022, and solicited written public comments by placing a newspaper advertisement in the *Richmond Times-Dispatch* on February 8, 2022. The thirty-day required comment period, provided for in 9VAC5-80-270 expired on March 10, 2022.

This permit contains legally enforceable conditions. Failure to comply may result in a Notice of Violation and/or civil charges. Please read all permit conditions carefully.

This permit approval to operate shall not relieve INGENCO Wholesale Power, LLC of the responsibility to comply with all other local, state, and federal permit regulations.

The Board's Regulations as contained in Title 9 of the Virginia Administrative Code 5-170-200 provide that you may request a formal hearing from this case decision by filing a petition with

Mr. Thomas Fabrie

April 27, 2022

Page 2

the Board within 30 days after this case decision notice was mailed or delivered to you. Please consult the relevant regulations for additional requirements for such requests.

As provided by Rule 2A:2 of the Supreme Court of Virginia, you have 30 days from the date you actually received this permit or the date on which it was mailed to you, whichever occurred first, within which to initiate an appeal of this decision by filing a Notice of Appeal with:

Michael S. Rolband, Director  
Department of Environmental Quality  
P. O. Box 1105  
Richmond, VA 23218

If this permit was delivered to you by mail, three days are added to the thirty-day period in which to file an appeal. Please refer to Part Two A of the Rules of the Supreme Court of Virginia for information on the required content of the Notice of Appeal and for additional requirements governing appeals from decisions of administrative agencies.

If you have any questions concerning this permit, please contact the Piedmont Regional Office at (804) 527-5020.

Sincerely,

Rob Feagins  
Air Permit Manager  
Southwest Regional Office

GRF/ABM/52037VA.FNL-22

Attachment: Permit

cc: Director, OAPP (electronic file submission)  
Manager, Data Analysis (electronic file submission)  
Office of Permits and Air Toxics (3AP10), U.S. EPA, Region III (electronic file submission)



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Regional Director

**Federal Operating Permit  
Article 1**

This permit is based upon the requirements of Title V of the Federal Clean Air Act and Chapter 80, Article 1, of the Commonwealth of Virginia Regulations for the Control and Abatement of Air Pollution. Until such time as this permit is reopened and revised, modified, revoked, terminated or expires, the permittee is authorized to operate in accordance with the terms and conditions contained herein. This permit is issued under the authority of Title 10.1, Chapter 13, §10.1-1322 of the Air Pollution Control Law of Virginia. This permit is issued consistent with the Administrative Process Act, and 9VAC5-80-50 through 9VAC5-80-300, of the State Air Pollution Control Board Regulations for the Control and Abatement of Air Pollution of the Commonwealth of Virginia.

Authorization to operate a Stationary Source of Air Pollution as described in this permit is hereby granted to:

Permittee Name: INGENCO Wholesale Power, LLC  
Facility Name: INGENCO Chesterfield  
Facility Location: 11740 Lewis Road  
Chesterfield County, Virginia

Registration Number: 52037  
Permit Number: PRO-52037

This permit includes the following programs:

Federally Enforceable Requirements - Clean Air Act

October 17, 2022  
Effective Date

October 16, 2027

Expiration Date

Jeffrey Hurst

Regional Director

Southwest Regional Office

April 27, 2022

Signature Date

Table of Contents, page 3

Permit Conditions, pages 7 through 35

Table of Contents

Facility Information ..... 4

Emission Units ..... 5

Fuel Burning Equipment Requirements – (A1 – A6, B1 – B6, C1 – C6, D1 – D6, E1 – E6, F1 – F6, G1 – G6, H1 – H6, and B1) ..... 7

Insignificant Emission Units ..... 25

Permit Shield & Inapplicable Requirements ..... 25

General Conditions ..... 27

## **Facility Information**

Permittee  
INGENCO Wholesale Power, LLC  
2250 Dabney Road  
Richmond, Virginia 23230

Responsible Official  
Mr. Thomas Fabrie  
CFO Operations and Maintenance Planning

Facility  
INGENCO Chesterfield  
11740 Lewis Road  
Chester, Virginia 23831

Contact Person  
Meridith Spurlock  
Manager ES&H Regulatory Compliance  
(832) 849-6094

County-Plant Identification Number: 51-041-00487

Facility Description: NAICS 221117 – The INGENCO Chesterfield facility consists of 48 Detroit Diesel Series 60 dual-fuel diesel engines, each paired with a generator for the production of electricity for commercial sale. Fuels for the engines include No. 1 and No. 2 distillate oil, No. 4 fuel oil, biodiesel and treated landfill gas. Landfill gas (LFG) is supplied by the Shoosmith Brothers Landfill. Each engine is rated at 550 horsepower. Each generator is capable of producing up to 350 kilowatts of electrical power. The total generating capacity of the facility is 16.8 megawatts.

The engines are arranged in eight groups with six engines per group. Each group is exhausted through a single stack. The engines can be operated in single fuel mode burning only liquid fuel, or in dual-fuel mode burning liquid fuel and LFG. Normal baseload operation of the engines is in dual-fuel mode with LFG fractions not exceeding 98 percent. Percent gas fraction (GF) is the percent of total energy required to operate the engines derived from LFG methane. The engines start on 100 percent liquid fuel and transition to LFG fractions no greater than 98 percent.

Other equipment at the facility includes a fuel oil-fired Burnham boiler rated at 0.195 million Btu per hour, and lubrication oil and fuel oil storage tanks.

## Emission Units

Process Equipment to be operated consists of:

Emission Unit ID	Stack ID	Emission Unit Description	Size/Rated Capacity*	Pollution Control Device (PCD) Description*	PCD ID	Pollutant Controlled	Applicable Permit Date
A1 – A6	S1	Six Detroit Diesel Model 6063-GK60 dual-fuel diesel engines	550 hp and 3.57 MMBtu/hr heat input, each engine	Passive controls: air-to-fuel ratio control, turbo-charging, custom built after coolers and charge-air cooling systems, engine control modules	Not Applicable	NO <sub>x</sub> , CO, SO <sub>2</sub> , VOC, PM/PM10	7/30/2012
B1 – B6	S2	Six Detroit Diesel Model 6063-GK60 dual-fuel diesel engines	550 hp and 3.57 MMBtu/hr heat input, each engine	Passive controls: air-to-fuel ratio control, turbo-charging, custom built after coolers and charge-air cooling systems, engine control modules	Not Applicable	NO <sub>x</sub> , CO, SO <sub>2</sub> , VOC, PM/PM10	7/30/2012
C1 – C6	S3	Six Detroit Diesel Model 6063-GK60 dual-fuel diesel engines	550 hp and 3.57 MMBtu/hr heat input, each engine	Passive controls: air-to-fuel ratio control, turbo-charging, custom built after coolers and charge-air cooling systems, engine control modules	Not Applicable	NO <sub>x</sub> , CO, SO <sub>2</sub> , VOC, PM/PM10	7/30/2012
D1 – D6	S4	Six Detroit Diesel Model 6063-GK60 dual-fuel diesel engines	550 hp and 3.57 MMBtu/hr heat input, each engine	Passive controls: air-to-fuel ratio control, turbo-charging, custom built after coolers and charge-air cooling systems, engine control modules	Not Applicable	NO <sub>x</sub> , CO, SO <sub>2</sub> , VOC, PM/PM10	7/30/2012
E1 – E6	S5	Six Detroit Diesel Model 6063-GK60 dual-fuel diesel engines	550 hp and 3.57 MMBtu/hr heat input, each engine	Passive controls: air-to-fuel ratio control, turbo-charging, custom built after coolers and charge-air cooling systems, engine control modules	Not Applicable	NO <sub>x</sub> , CO, SO <sub>2</sub> , VOC, PM/PM10	7/30/2012
F1 – F6	S6	Six Detroit Diesel Model 6063-GK60 dual-fuel diesel engines	550 hp and 3.57 MMBtu/hr heat input, each engine	Passive controls: air-to-fuel ratio control, turbo-charging, custom built after coolers and charge-air cooling systems, engine control modules	Not Applicable	NO <sub>x</sub> , CO, SO <sub>2</sub> , VOC, PM/PM10	7/30/2012
G1 – G6	S7	Six Detroit Diesel Model 6063-GK60 dual-fuel diesel engines	550 hp and 3.57 MMBtu/hr heat input, each engine	Passive controls: air-to-fuel ratio control, turbo-charging, custom built after coolers and charge-air cooling systems, engine control modules	Not Applicable	NO <sub>x</sub> , CO, SO <sub>2</sub> , VOC, PM/PM10	7/30/2012

<b>Emission Unit ID</b>	<b>Stack ID</b>	<b>Emission Unit Description</b>	<b>Size/Rated Capacity*</b>	<b>Pollution Control Device (PCD) Description*</b>	<b>PCD ID</b>	<b>Pollutant Controlled</b>	<b>Applicable Permit Date</b>
H1 – H6	S8	Six Detroit Diesel Model 6063-GK60 dual-fuel diesel engines	550 hp and 3.57 MMBtu/hr heat input, each engine	Passive controls: air-to-fuel ratio control, turbo-charging, custom built after coolers and charge-air cooling systems, engine control modules	Not Applicable	NO <sub>x</sub> , CO, SO <sub>2</sub> , VOC, PM/PM10	7/30/2012
-----	-----	Landfill gas treatment and transport system components	3,000 – 4,500 cfm	Not Applicable	Not Applicable	Not Applicable	7/30/2012
B1	B-1	Oil-fired Burnham boiler for space heating	0.195 MMBtu/hr	Not Applicable	Not Applicable	Not Applicable	Not Applicable

\*The Size/Rated capacity and PCD efficiency are provided for informational purposes only, and are not applicable requirements.

## **Fuel Burning Equipment Requirements – (A1 – A6, B1 – B6, C1 – C6, D1 – D6, E1 – E6, F1 – F6, G1 – G6, H1 – H6, and B1)**

### **Limitations**

1. Fuel Burning Equipment Requirements - Nitrogen oxides emissions from the 48 dual-fuel diesel engines (A1-H6) shall be controlled by the original equipment manufacturers air-to-fuel ratio control, turbo-charging and charge-air cooling systems or a change to the engine control module (ECM). The air-to-fuel ratio shall be controlled by a separate engine control module for each engine.  
(9VAC5-80-110 and Condition 2 of 7/30/2012 Permit)
2. Fuel Burning Equipment Requirements - Nitrogen oxides emissions from the 48 dual-fuel diesel engines (A1-H6) shall also be controlled by supplementary inlet charge-air water-to-air cooling and oversized inlet charge and exhaust ducts. The cooling system shall be capable of maintaining an hourly average inlet charge-air temperature not greater than 140°F. Water shall be provided continuously to each engine's inlet charge-air cooler and each engine shall have independent temperature measurement capabilities. The inlet charge-air cooler shall be provided with adequate access for inspection and shall be in operation when any of the 48 dual-fuel diesel engines (A1-H6) are operating.  
(9VAC5-80-110 and Condition 3 of 7/30/2012 Permit)
3. Fuel Burning Equipment Requirements - Nitrogen oxides emissions from the 48 dual-fuel diesel engines (A1-H6) shall be controlled by the combustion of treated landfill gas whenever any of the engines are operated in the dual fuel mode. The extent to which the dual fuel operations control nitrogen oxides emissions is dependent upon the heat substitution rate supplied by the treated landfill gas. To ensure that a stable supply of treated landfill gas is being diverted to the facility, the facility shall install and operate a device to monitor and record the process of diverting the collected landfill gas from the landfill gas collection and control system in order to ensure that the process of diverting the landfill gas is operated in accordance with the facilities' standard operating procedures.  
(9VAC5-80-110 and Condition 4 of 7/30/2012 Permit)
4. Fuel Burning Equipment Requirements - Carbon monoxide emissions from the 48 dual-fuel diesel engines (A1-H6) shall be controlled by limiting the ratio of treated landfill gas heat input to total fuel heat input up to an average not to exceed 98% on an annual basis. This is accomplished by setting the assumed liquid fuel flow in MMBtus to the compliment of the assumed gas flow rate in Btus. An increase in the heat input ratio to the 48 dual-fuel diesel engines (A1-H6) greater than an average 98% gas fraction on an annual basis or a change to the engine control module (ECM) may require a permit to modify and operate. The facility may, on prior approval from the Director, Piedmont Regional Office, operate for short periods at heat input ratios greater than an average 98% gas fraction on an annual basis or a change to the engine control module (ECM) for the purposes of research and development.  
(9VAC5-80-110 and Condition 5 of 7/30/2012 Permit)

5. Fuel Burning Equipment Requirements - Any uncontrolled venting of landfill gas from either the 48 dual-fuel diesel engines (A1-H6), the landfill gas treatment system, or the treated landfill gas transport system is prohibited. All treated landfill gas shall be purged from the treated landfill gas transport system prior to shutting down any engine after operating in the dual fuel mode. All atmospheric vents in the treated landfill gas transport system shall be controlled by a lockout-tag-out system or by installing and operating a device to divert the emissions from all vents to an approved landfill gas control system. (9VAC5-80-110 and Condition 6 of 7/30/2012 Permit)
6. Fuel Burning Equipment Requirements - Particulate matter and volatile organic compounds emissions from the 48 dual-fuel diesel engines (A1-H6) shall be controlled by proper engine maintenance practices. The engines shall be repaired and maintained to prevent excess emissions of particulate matter (in the form of PM and PM10) and volatile organic compounds. (9VAC5-80-110 and Condition 7 of 7/30/2012 Permit)
7. Fuel Burning Equipment Requirements - All components of the treated landfill gas control system, which consists of each one of the 48 dual-fuel diesel engines (A1-H6), the treated landfill gas moving system and the landfill gas treatment system, as specified in Condition 13, shall be in operation whenever the facility is operating the engines in a dual fuel mode. If any component of the landfill gas treatment system or treated landfill gas transport system malfunctions, the treated landfill gas transport system shall be shut down and all untreated landfill gas shall be diverted to the utility flare(s). If any engine or set of engines malfunctions, that portion of treated landfill gas shall be diverted to the remaining engines, or to the utility flare(s). (9VAC5-80-110 and Condition 8 of 7/30/2012 Permit)
8. Fuel Burning Equipment Requirements - The facility shall determine the heat value of the treated LFG on a weekly basis, using the following formula:

$$\text{Heat Value} \left( \frac{\text{BTU}}{\text{cf}} \right) = \left( \frac{\% \text{ Methane}}{100} \right) \times 992.65 \frac{\text{BTU}}{\text{cf}}$$

A log of the values shall be maintained. The methane-measuring device shall be maintained, calibrated and operated in accordance with approved procedures which shall include, as a minimum, the manufacturer's written requirements or recommendations. The measuring device shall be provided with adequate access for inspection. (9VAC5-80-110 and Condition 15 of 7/30/2012 Permit)

9. Fuel Burning Equipment Requirements - The entire landfill gas treatment system as specified in Condition 13 is required to comply with 40 CFR 60.752(b)(2)(iii)(C) and shall be installed and operational whenever landfill gas is being transferred to any of the 48 dual-fuel diesel engines (A1-H6). Verification of satisfactory operation of treatment equipment shall, at a minimum, include certification that manufacturer's written requirements or

recommendations for installation, operation, and maintenance of the devices shall be followed.  
 (9VAC5-80-110 and Condition 16 of 7/30/2012 Permit)

10. Fuel Burning Equipment Requirements - The approved fuels for the 48 dual-fuel diesel engines (A1-H6) are numbers 1 and number 2 distillate oil, biodiesel oil, number 4 fuel oil, and treated landfill gas. A change in the fuels may require a permit to modify and operate. (9VAC5-80-110 and Condition 17 of 7/30/2012 Permit)
11. Fuel Burning Equipment Requirements - The facility shall limit consumption of fuel such that neither the total nitrogen oxides (NO<sub>x</sub>) nor total carbon monoxide (CO) emissions exceed 240 tons, for any consecutive 12-month period. The emissions shall be calculated monthly as the sum of each consecutive 12-month period according to the following equations:

Given:

$$\text{NO}_x = \frac{\left[ \left( \frac{(A \times \text{CV}_{\text{liq}}) \times 1 \text{ MMBtu}}{1,000,000 \text{ Btu}} \right) \times \text{ENO}_x(\text{l}) 1 \text{ lbs/MMBtu} \right] + \left[ \left( \frac{(B \times \text{CV}_{\text{LFG}}) \times 1 \text{ MMBtu}}{1,000,000 \text{ Btu}} \right) \times \text{ENO}_x(\text{LFG}) \times \text{lb/MMBtu} \right]}{2000 \text{ lb/ton}}$$

$$\text{CO} = \frac{\left[ \left( \frac{(A \times \text{CV}_{\text{liq}}) \times 1 \text{ MMBtu}}{1,000,000 \text{ Btu}} \right) \times \text{ECO}_x(\text{l}) 1 \text{ lbs/MMBtu} \right] + \left[ \left( \frac{(B \times \text{CV}_{\text{LFG}}) \times 1 \text{ MMBtu}}{1,000,000 \text{ Btu}} \right) \times \text{ECO}_x(\text{LFG}) \times \text{lb/MMBtu} \right]}{2000 \text{ lb/ton}}$$

Where:

A = gallons of liquid fuel consumed as numbers 1 and 2 distillate oil, biodiesel oil, or number 4 residual oil.

B = cubic feet of landfill gas consumed.

CV<sub>liq</sub> = calorific value (heat content) in Btu/gallon of the corresponding liquid fuel as biodiesel as specified in Condition 12 or 137,000 Btu/gallon for distillate oil or 144,000 Btu/gallon for number 4 residual oil.

CV<sub>LFG</sub> = calorific value (heat content) in Btu/cubic foot of treated landfill gas as determined by Condition 8.

ENO<sub>x</sub> (l) = Emissions factor for NO<sub>x</sub> from liquid fuel as shown in the table below.

ENO<sub>x</sub>(LFG) = Emissions factor for NO<sub>x</sub> from landfill gas as shown in the table below.

ECO<sub>x</sub>(l) = Emissions factor for CO from liquid fuel as shown in the table below.

ECO<sub>x</sub>(LFG) = Emissions factor for CO from landfill gas as shown in the table below:

Emission Factors:

Landfill Gas Substitution Range (NO <sub>x</sub> )	ENO <sub>x</sub> (l)	ENO <sub>x</sub> (LFG)
0% - 30%	2.15	- 0.40
31% - 80%	1.50	1.50
81% - 96%	5.00	0.70
81% - 96% (New PCM128 Units)	7.35	0.085
96% - an average ≤98% (New PCM128 Units/Injectors/Cams)	4.166	0.187

  

Landfill Gas Substitution Range (CO)	ECO <sub>x</sub> (l)	ECO <sub>x</sub> (LFG)
0% - 54%	0.26	5.25
55% - 96%	5.60	0.80
81% - 96% (New PCM128 Units)	5.65	0.305
96% - an average ≤98% (New PCM128 Units/Injectors/Cams)	7.838	0.524

Such that:

NO<sub>x</sub> ≤ 240 tons/yr calculated as the sum of each consecutive 12-month period as a product of the heat input contribution from each fuel source.

CO ≤ 240 tons/yr calculated as the sum of each consecutive 12-month period as a product of the heat input contribution from each fuel source.

Each equation is valid only if the total heat input contribution from treated landfill gas heat input is less than or equal to 98% of the total heat input for any period of continuous dual-fuel operation, expressed as the ratio of treated landfill gas heat input to total fuel heat input (for each period of continuous dual-fuel operation), according to the following equation:

$$HI_{LFG} = \frac{B \times CV_{LFG}}{(A \times CV_{liq}) + (B \times CV_{LFG})} \times 100 \leq 98\%$$

(9VAC5-80-110 and Condition 18 of 7/30/2012 Permit)

- Fuel Burning Equipment Requirements - The fuel oils and treated landfill gas shall meet the specifications below:

Distillate oils which meet the ASTM D396 specifications for numbers 1 and 2 fuel oil:

Maximum sulfur content per shipment: 0.5%  
 Average sulfur content: 0.25%

Biodiesel fuel oil which meets the ASTM D6751 specifications:

Maximum sulfur content per shipment: 0.5%

Nominal heat content: 131,295 BTU/gallon

Residual oil which meets the ASTM D396 specifications for number 4 fuel oil:

Sulfur content per shipment: 0.5%

Treated landfill gas:

Minimum heat content: 200 Btu/scf

The heat content of the treated landfill gas shall be analyzed for gross calorific value using method outlined in Condition 8. The heat content of each fuel listed shall be used to calculate the facility's emissions as defined by the emission factors and limits found in Conditions 10, 11, 14, and 15.

(9VAC5-80-110 and Condition 19 of 7/30/2012 Permit)

13. Fuel Burning Equipment Requirements - Treated landfill gas shall be that which is produced by the Shoosmith Brothers Landfill (Reg. No. 50752) as that facility is permitted by the Virginia Department of Environmental Quality and has been processed in accordance with 40 CFR60.752 (b)(2)(iii)(C). The landfill gas treatment system, at a minimum, shall be composed of a de-watering process, filtration through a 10-micron filter, and compression. The facility's de-watering process shall consist of a tertiary or polishing tank with a total capacity of 150 gallons. The primary and secondary knockout tanks are located at the Shoosmith Brothers Landfill (Reg. No. 50752). All landfill gas consumed at the permitted facility shall pass through each component of the landfill gas treatment process prior to use in the combustion process.  
 (9VAC5-80-110 and Condition 20 of 7/30/2012 Permit)

14. Fuel Burning Equipment Requirements - Emissions from the operation of any of the 48 dual-fuel diesel engines (A1-H6) when the facility is operated in either the single fuel or the dual fuel mode shall not exceed the limits specified below.

Particulate Matter	0.3 lb/MMBtu
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PM10	0.3 lb/MMBtu
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PM2.5	0.3 lb/MMBtu
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Sulfur Dioxide	0.5 lb/MMBtu
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Nitrogen Oxides (as NO <sub>2</sub> )	2.4 lb/MMBtu
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Carbon Monoxide	4.3 lb/MMBtu
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Volatile Organic Compounds	0.4 lb/MMBtu
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Compliance with the lb/MMBtu limits for PM, PM10, NOx, CO, and VOC shall be determined by stack testing. All other emission limits are derived from the estimated overall emission contribution from operating limits. Exceedance of the operating limits shall be considered credible evidence of the exceedance of emission limits. Compliance with these emission limits may be determined as stated in Conditions 1 – 7, and Conditions 10 – 13.

(9VAC5-80-110 and Condition 22 of 7/30/2012 Permit)

15. Fuel Burning Equipment Requirements - Total emissions from the facility whether it is operated in the single fuel or the dual fuel mode shall not exceed the limits specified below, calculated monthly as the sum of each consecutive 12-month period:

Particulate Matter	51.4 lb/hour	72.6 tons/year
PM10	51.4 lb/hour	72.6 tons/year
PM2.5	51.4 lb/hour	72.6 tons/year
Sulfur Dioxide	86.5 lb/hour	73.3 tons/year
Nitrogen Oxides (as NO <sub>2</sub> )	411.3 lb/hour	240.0 tons/year
Carbon Monoxide	1045.3 lb/hour	240.0 tons/year
Volatile Organic Compounds	68.5 lb/hour	96.8 tons/year

Emissions limits are derived from the estimated overall emission contribution from operating limits. Exceedance of the operating limits shall be considered credible evidence of the exceedance of emission limits. Compliance with these emission limits may be determined as stated in Conditions 1 – 7, and 10 – 13.

(9VAC5-80-110 and Condition 23 of 7/30/2012 Permit)

16. Fuel Burning Equipment Requirements - Visible emissions from the 48 dual-fuel diesel engines' (A1-H6) stacks (S1-S8) shall not exceed 10% opacity whenever the engines are operated in a single fuel mode except during one six-minute period in any one hour in which visible emissions shall not exceed 20% opacity. Visible emissions from the 48 dual-fuel diesel engines' (A1-H6) stacks (S1-S8) shall not exceed 20% opacity whenever the engines are operated in a dual fuel mode except during one six-minute period in any one hour in which visible emissions shall not exceed 30% opacity. All visible emissions rates shall be determined by EPA Method 9 (reference 40 CFR 60, Appendix A). This condition applies at all times except during startup, shutdown, and malfunction.

(9VAC5-80-110 and Condition 24 of 7/30/2012 Permit)

17. Fuel Burning Equipment Requirements - At all times, including periods of start-up, shutdown and malfunction, the permittee shall, to the extent practicable, maintain and operate the affected source (A1-H6), including associated air pollution control equipment, in a manner consistent with good air pollution control practices for minimizing emissions.

The permittee shall take the following measures in order to minimize the duration and frequency of excess emissions, with respect to air pollution control equipment and process equipment which affect such emissions:

- a. Develop a maintenance schedule and maintain records of all scheduled and non-scheduled maintenance;
- b. Maintain an inventory of spare parts;
- c. Have available written operating procedures for equipment. These procedures shall be based on the manufacturer's recommendations, at a minimum;
- d. Train operators in the proper operation of all such equipment and familiarize the operators with the written operating procedures, prior to their first operation of such equipment. The permittee shall maintain records of the training provided including the names of trainees, the date of training and the nature of the training.

Records of maintenance and training shall be maintained on site for a period of five years and shall be made available to DEQ personnel upon request.  
(9VAC5-80-110 and Condition 40 of 7/30/2012 Permit)

18. Fuel Burning Equipment Requirements - The facility shall combust treated landfill gas from Shoosmith Brothers Landfill (Reg. No. 50752) in the 48 dual-fuel diesel engines' (A1-H6) in an amount which is equivalent to 10 percent or more of the gross heat input on an annual basis. The diesel and biodiesel fuel used by the 48 dual-fuel diesel engines (A1-H6) must meet the requirements in 40 CFR 1090.305 for nonroad diesel fuel.  
(9VAC5-80-110 and 40 CFR 63.6604(a))
19. Fuel Burning Equipment Requirements - Except where this permit is more restrictive than the applicable requirement, each engine (A1-H6) shall be operated in compliance with the applicable requirements of 40 CFR 63, Subpart ZZZZ – National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines at all times.  
(9VAC5-80-110 and 40 CFR 63.6605(a))
20. Fuel Burning Equipment Requirements - At all times the permittee must operate and maintain the engines (A1-H6) and the boiler (B1), including associated air pollution control equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions. The general duty to minimize emissions does not require the permittee to make any further efforts to reduce emissions if levels required by this standard

have been achieved. Determination of whether such operation and maintenance procedures are being used will be based on information available to the DEQ which may include, but is not limited to, monitoring results, review of operation and maintenance procedures, review of operation and maintenance records, and inspection of the source.

(9VAC5-80-110, 40 CFR 63.6605(a) and 40 CFR 63.11205(a))

21. Fuel Burning Equipment Requirements - The permittee shall operate and maintain each engine (A1-H6) and any after-treatment control device according to the manufacturer's emission-related written instructions or develop a maintenance plan which must provide to the extent practicable for the maintenance and operation of each engine in a manner consistent with good air pollution control practice for minimizing emissions.  
(9VAC5-80-110, 40 CFR 63.6625(e)(6) and 40 CFR 63.6640(a))
22. Fuel Burning Equipment Requirements - The permittee shall, at a minimum, change the oil and oil filter every 1,440 hours of operation or annually, whichever comes first, for each engine (A1-H6). The permittee shall inspect all engine (A1-H6) hoses and belts every 1,440 hours of operation or annually, whichever comes first, and replace as necessary. The permittee shall minimize the engines' (A1-H6) time spent at idle during startup and minimize the engines' startup time to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes.  
(9VAC5-80-110, 40 CFR 63.6603(a), 40 CFR 63.6625(h) and Table 2d (13) of 40 CFR 63 Subpart ZZZZ)
23. Fuel Burning Equipment Requirements - Except where this permit is more restrictive than the applicable requirement, the boiler (B1) shall be operated in compliance with the requirements of 40 CFR 63, Subpart JJJJJ – National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers Area Sources. These requirements apply at all times the boiler (B1) is operating, except during periods of startup and shutdown as defined in 40 CFR 63.11237, during which time the permittee must comply only with Table 2 of Subpart JJJJJ  
(9VAC5-80-110 and 40 CFR 63.11201(b) and (d))
24. Fuel Burning Equipment Requirements - Visible Emissions from the boiler (B1) shall not exceed 20 percent opacity except during one six-minute period in any one hour in which visible emissions shall not exceed 30 percent opacity as determined by EPA Method 9 (reference 40 CFR 60, App. A).  
(9VAC5-80-110 and 9VAC5-50-80)

## Monitoring

25. Fuel Burning Equipment Requirements - The facility shall be equipped with devices to continuously measure and record treated landfill gas, numbers 1 and 2 distillate oil, biodiesel oil, and number 4 fuel oil consumption by the 48 dual-fuel diesel engines (A1-H6). Each device shall be installed, maintained, calibrated and operated in accordance with approved procedures which shall include, as a minimum, the manufacturer's written

requirements or recommendations. Each device shall be provided with adequate access for inspection and shall be in operation when the facility is operating.  
(9VAC5-80-110 and Condition 9 of 7/30/2012 Permit)

26. Fuel Burning Equipment Requirements - Each of the dual-fuel diesel engines (A1-H6) shall be equipped with a device to continuously measure engine inlet charge-air temperature. Each device shall be installed, maintained, calibrated and operated in accordance with approved procedures which shall include, as a minimum, the manufacturer's written requirements or recommendations. Each device shall be provided with adequate access for inspection and shall be in operation when the engine is operating.  
(9VAC5-80-110 and Condition 10 of 7/30/2012 Permit)
27. Fuel Burning Equipment Requirements - The facility shall be equipped with devices to continuously measure the pressure within the treated landfill gas transport system. At a minimum, devices shall be located just before and just after the 10-micron filter and after the completed treatment process. Each monitoring device shall be installed, maintained, calibrated and operated in accordance with approved procedures which shall include, as a minimum, the manufacturer's written requirements or recommendations. Each monitoring device shall be provided with adequate access for inspection and shall be in operation when the facility is operating.  
(9VAC5-80-110 and Condition 11 of 7/30/2012 Permit)
28. Fuel Burning Equipment Requirements - The facility shall log observations of landfill gas fraction and inlet charge air temperature for each dual-fuel diesel engine (A1-H6) when operating (engines noted as "OFF" when not running). The log shall contain a minimum of hourly observations processed monthly and stored onsite. The facility will maintain a written log, stored onsite, containing hourly observations for the periods of electronic/computer problems/failure to commence within one hour of an electronic records problem/computer failure. The log shall be used for emissions calculations during periods where some or all electronic data are not available. In the case where no electronic information or manual records are available, the facility will calculate emissions using worst case scenario.  
(9VAC5-80-110 and Condition 12 of 7/30/2012 Permit)
29. Fuel Burning Equipment Requirements - The monitoring devices used to measure inlet charge-air temperature shall be observed by the facility with a frequency of not less than once per hour whenever the dual-fuel diesel engines (A1-H6) are operating. The facility shall keep a daily-log of the temperature observations of the devices and the time the observation was recorded.  
(9VAC5-80-110 and Condition 13 of 7/30/2012 Permit)
30. Fuel Burning Equipment Requirements - The devices used to measure the pressure in the treated landfill gas system shall be observed by the facility whenever treated landfill gas is combusted in the dual-fuel diesel engines (A1-H6) with a frequency of not less than once per day to ensure good performance of the treatment system. The facility shall keep a

daily-log of the observations of the devices, to include the change in pressure across the 10-micron filter.

(9VAC5-80-110 and Condition 14 of 7/30/2012 Permit)

31. Fuel Burning Equipment Requirements - The facility shall drain the polishing tank referenced in Condition 13 at least once each day that landfill gas is consumed by the facility, and observe the presence or absence of any water collected in the tank. The facility shall maintain a daily log of these observations, which shall include the date and time of each observation.

(9VAC5-80-110 and Condition 31 of 7/30/2012 Permit)

32. Fuel Burning Equipment Requirements - Once per month, the permittee shall conduct an observation of the presence of visible emissions from the operating 48 internal combustion engines (A1-H6). If visible emissions are observed, the permittee shall take timely corrective action such that the units resume operation with no visible emissions, or perform a visible emissions evaluation (VEE) in accordance with 40 CFR 60, Appendix A, Method 9 to assure visible emissions from any of the 48 internal combustion engines (A1-H6) does not exceed 10% opacity whenever the engines are operated in a single fuel mode, except during one six-minute period in any one hour in which visible emissions shall not exceed 20% opacity and visible emissions from the 48 dual-fuel diesel engines (A1-H6) stacks (S1-S8) shall not exceed 20% opacity whenever the engines are operated in a dual fuel mode except during one six-minute period in any one hour in which visible emissions shall not exceed 30% opacity. The VEE shall be conducted for a minimum of six minutes. If any of the observation exceeds 10% opacity, the VEE shall be conducted for sixty minutes. If compliance is not demonstrated by the VEE, timely corrective action shall be taken such that the operating engines resumes operation that is in compliance with the opacity limit for single or dual fuel mode as appropriate. The permittee shall maintain an observation log to demonstrate compliance. The log shall include the date and time of the observation, single or dual fuel operations, whether or not there were visible emissions, any VEE recordings and necessary corrective actions. Upon request by the DEQ, the permittee shall conduct additional visible emission evaluations from the 48 internal combustion engines (A1-H6) to demonstrate compliance with the visible emission limits contained in this permit. The details of the tests shall be arranged with the Director, Piedmont Regional Office.

(9VAC5-80-110 and Condition 34 of 7/30/2012 Permit)

33. Fuel Burning Equipment Requirements - Once per month, the permittee shall conduct an observation of the presence of visible emissions from the operating boiler (B1). If visible emissions are observed, the permittee shall take timely corrective action such that the unit resumes operation with no visible emissions, or perform a visible emissions evaluation (VEE) in accordance with 40 CFR 60, Appendix A, Method 9 to assure visible emissions from the boiler does not exceed 20% opacity except during one six-minute period in any one hour in which visible emissions shall not exceed 30% opacity. The VEE shall be conducted for a minimum of six minutes. If any of the observations exceeds 20% opacity, the VEE shall be conducted for sixty minutes. If compliance is not demonstrated by the VEE, timely corrective action shall be taken such that the operating boiler resumes

operation that is in compliance with the opacity limit. The facility shall maintain an observation log to demonstrate compliance. The log shall include the date and time of the observation, whether or not there were visible emissions, any VEE recordings and necessary corrective actions. Upon request by the Department, the permittee shall conduct additional visible emission evaluations from the boiler to demonstrate compliance with the visible emission limits contained in this permit. The details of the tests shall be arranged with the Director, Piedmont Regional Office.  
(9VAC5-80-110)

34. Fuel Burning Equipment Requirements - The permittee shall conduct and record the results of a performance tune-up on the boiler (B1) every 5 years according to the following:
- a. As applicable, inspect the burner, and clean or replace any components of the burner as necessary. Burner inspection may be delayed until the next scheduled shutdown, not to exceed 36 months from the previous inspection.
  - b. Inspect the flame pattern, as applicable, and adjust the burner as necessary to optimize the flame pattern. The adjustment should be consistent with the manufacturer's specifications, if applicable.
  - c. Inspect the system controlling the air-to-fuel ratio, as applicable, and ensure that it is correctly calibrated and functioning properly. Inspection may be delayed until the next scheduled unit shutdown, not to exceed 36 months from the previous inspection.
  - d. Optimize total emissions of CO. This optimization should be consistent with the manufacturer's specifications, if applicable, and with any nitrogen oxide requirement to which the unit is subject.
  - e. Measure the concentrations in the effluent stream of CO in parts per million, by volume, and oxygen in volume percent, before and after the adjustments are made. Measurements may be either on a dry basis, as long as it is the same basis before and after the adjustments are made. Measurements may be taken using a portable CO analyzer.
  - f. If the unit is not operating on the required date for a tune-up, the tune-up must be conducted within 30 days of startup.

Each 5-year tune-up must be conducted no more than 61 months after the previous tune-up. The burner inspection specified in Condition 34.a and the inspection of the system controlling the air-to-fuel ratio specified in Condition 34.b may be delayed until the next scheduled unit shutdown, but each burner and system controlling the air-to-fuel ratio must be inspected at least once every 72 months.  
(9VAC5-80-110 and 40 CFR 63.11223(a) and (e))

## **Recordkeeping**

35. Fuel Burning Equipment Requirements - The permittee shall obtain a certification from the fuel supplier with each shipment of distillate oil, biodiesel fuel, or number 4 oil. Each fuel supplier certification shall include the following:
- a. The name of the fuel supplier;
  - b. The date on which the fuel oil was received;
  - c. The volume of the fuel oil delivered in the shipment;
  - d. A statement that the distillate oil complies with the American Society for Testing and Materials specifications D396 for numbers 1 or 2 fuel oil or a statement that the residual oil complies with the American Society for Testing and Materials specifications D396 for numbers 4, 5, or 6 fuel oil or a statement that the biodiesel oil complies with the American Society for Testing and Materials specifications (ASTM D6751);
  - e. The heat value (in Btu/gal) of the biodiesel fuel oil; and
  - f. A statement that the sulfur content of the fuel oil does not exceed by weight, the maximum sulfur content that is specified for each fuel oil in Condition 12.

Fuel sampling and analysis, independent of that used for certification, as may be periodically required or conducted by DEQ may be used to determine compliance with the fuel specifications stipulated in Condition 12. Exceedance of these specifications may be considered credible evidence of the exceedance of emission limits.  
(9VAC5-80-110 and Condition 21 of 7/30/2012 Permit)

36. Fuel Burning Equipment Requirements - The permittee shall maintain records of all emission data and operating parameters necessary to demonstrate compliance with this permit. The content and format of such records shall be arranged with the Director, Piedmont Regional Office. These records shall include, but are not limited to:
- a. Annual consumption by the engines (A1-H6) of landfill gas, numbers 1 and 2 distillate oil, biodiesel oil, and number 4 residual oil, calculated monthly as the sum of each consecutive 12-month period;
  - b. Daily records of fuel consumption for every period of operation of the engines (A1-H6) to verify compliance with Conditions 4, 11, 25 and 28;

- c. Daily records of treated landfill gas heat input to the engines (A1-H6) as the ratio of total heat input for every period of continuous operation to verify compliance with Conditions 4 and 11. Heat input calculations shall be based on the data required by Condition 28;
- d. Daily log of the polishing tank observation results as described in Condition 31;
- e. Hourly records of engine (A1-H6) inlet charge-air temperature reading to verify compliance with Condition 2;
- f. All 1 hour periods of operation of the engines (A1-H6) during which the charge-air temperature as described in Condition 2 exceeds the average charge-air temperature limit of 140° F;
- g. Monthly and annual emissions (in tons) from the engines (A1-H6) using calculation methods approved by the Director, Piedmont Regional Office to verify compliance with emission limitations in Conditions 11, 14 and 15. Annual emissions shall be calculated monthly as the sum of each consecutive 12-month period;
- h. Treated landfill gas transport system pressure readings to verify compliance with Condition 30;
- i. Weekly landfill gas gross calorific value determination results, including % methane readings as described in Condition 8;
- j. Results of all stack tests, visible emissions evaluations (VEE), monthly visible emissions evaluations log, and performance evaluations of the engines (A1-H6);
- k. All fuel supplier certifications;
- l. Scheduled and unscheduled maintenance on the engines (A1-H6);
- m. Operating procedures and operator training records for the engines (A1-H6); and
- n. All records generated by the device installed for the purpose of continuously monitoring and recording the status of the device used to divert the collected landfill gas from a utility flare to the landfill gas treatment system and then to the engines (A1-H6), as required by Condition 3.

These records shall be available on site for inspection by the DEQ and shall be current for the most recent (5) years.

(9VAC5-80-110 and Condition 25 of 7/30/2012 Permit)

37. Fuel Burning Equipment Requirements - The permittee shall maintain all records required by 40 CFR Part 63 Subpart ZZZZ and this permit, as applicable to the engines (A1-H6), which include the following:
- a. A copy of each notification and report submitted to comply with Subpart ZZZZ, including all documentation supporting any Initial Notification or Notification of Compliance Status that is submitted, according to the requirement in §63.10(b)(2)(xiv);
  - b. Records of the occurrence and duration of each malfunction of operation ( i.e., process equipment) or the air pollution control and monitoring equipment;
  - c. Records of performance tests and performance evaluations as required in §63.10(b)(2)(viii);
  - d. Records of all required maintenance performed on the air pollution control and monitoring equipment;
  - e. Records of actions taken during periods of malfunction to minimize emissions in accordance with §63.6605(b), including corrective actions to restore malfunctioning process and air pollution control and monitoring equipment to its normal or usual manner of operation;
  - f. Records demonstrating compliance with the work and management practices required in Condition 22;
  - g. A copy of a site specific maintenance and operation plan for the engines that is consistent with good air pollution control for minimizing emissions in accordance with 40 CFR 63.6655(e)(3) and Table 6 (9.a.ii) of 40 CFR 63 Subpart ZZZZ;
  - h. Calculations demonstrating compliance with Condition 18; and
  - i. Any problems or errors suspected with the fuel meters and any corrective action taken.

These records shall be available on site for inspection by the DEQ and shall be current for the most recent (5) years.

(9VAC5-80-110, 40 CFR 63.6605(a-b), 40 CFR 63.6660, 40 CFR 63.6655(e)(3) and Table 6 (9.a.ii) of 40 CFR Part 63, Subpart ZZZZ)

38. Fuel Burning Equipment Requirements - The permittee shall maintain all records required by MACT, Subpart JJJJJ and this permit, as applicable to the Burnham boiler (B1), which include the following:
- a. As required in § 63.10(b)(2)(xiv), keep a copy of each notification and report submitted to comply with Subpart JJJJJ and all documentation supporting any Initial

Notification or Notification of Compliance Status submitted;

- b. Results of each tune-up of the boiler, including the date of the tune-up, the procedures followed for the tune-up, and the manufacturer's specifications to which the boiler was tuned;
- c. Records of the occurrence and duration of each malfunction of the boiler, or of the associated air pollution control and monitoring equipment;
- d. Records of actions taken during periods of malfunction to minimize emissions in accordance with the general duty to minimize emissions in 40 CFR 63.11205(a), including corrective actions to restore the malfunctioning boiler, air pollution control, or monitoring equipment to its normal or usual manner of operation;
- e. The results of the monthly visible emission observations as detailed and required by Condition 33 and details of any corrective action(s) taken as a result of these observations.

These records shall be available on site for inspection by the DEQ and shall be current for the most recent (5) years.

(9VAC5-80-110 and 40 CFR 63.11225(c)(1), (c)(2)(i), (c)(4), (c)(5) and (d))

## Testing

39. Fuel Burning Equipment Requirements - Performance tests shall be conducted for NO<sub>x</sub> and CO emissions from the 48 dual-fuel diesel engines (A1-H6) to determine compliance with the emission limits contained in Conditions 11, 14 and 15. The tests shall be performed while operating in single fuel mode using 100% distillate oil. The tests shall be performed at no less than 80% of the rated capacity of the electrical output on a minimum of one set of six engines. The tests shall be performed, and demonstrate compliance within 60 days after achieving the maximum production rate at which the facility will be operated but in no event later than 180 days after start-up of the permitted facility. The tests shall be conducted and reported and data reduced as set forth in 9VAC5-50-30. The details of the tests are to be arranged with the Director, Piedmont Regional Office. The permittee shall submit a test protocol at least 30 days prior to testing. Two copies of the test results shall be submitted to the Director, Piedmont Regional Office within 60 days after test completion and shall conform to the test report format enclosed with this permit.

(9VAC5-80-110 and Condition 26 of 7/30/2012 Permit)

40. Fuel Burning Equipment Requirements - Performance tests shall be conducted for NO<sub>x</sub>, CO, VOC, and PM<sub>10</sub> emissions from the 48 dual-fuel diesel engines (A1-H6) to determine compliance with the emission limits contained in Conditions 11, 14 and 15. The dual fuel tests shall be performed at no less than 65% of the rated capacity of the electrical output on a minimum of one set of six engines at two points between 70% and 98% gas fraction on a Btu basis with one point within 4% of the 98% end point. The tests shall be performed, and

demonstrate compliance within 60 days after achieving the maximum production rate at which the facility will be operated, but in no event later than 180 days after the date of issue of this permit. The tests shall be conducted and reported and data reduced as set forth in 9VAC5-50-30. The details of the tests are to be arranged with the Director, Piedmont Regional Office. The facility shall submit a test protocol at least 30 days prior to testing. Two copies of the test results shall be submitted to the Director, Piedmont Regional Office within 60 days after test completion and shall conform to the test report format enclosed with this permit.

(9VAC5-80-110 and Condition 27 of 7/30/2012 Permit)

41. Fuel Burning Equipment Requirements - An initial performance test shall be conducted for NO<sub>x</sub> and CO from the 48 dual-fuel diesel engines (A1-H6), within 60 days of the Piedmont Regional Office receiving notice of the combustion of number 4 fuel oil and/or biodiesel, to determine compliance with the emission limits contained in Conditions 11, 14 and 15. Separate tests shall be performed while operating in single fuel mode using 100% number 4 fuel oil and/or biodiesel and in dual fuel mode using various quantities of landfill gas and number 4 fuel oil and/or biodiesel. The number 4 fuel oil and/or biodiesel test shall be performed at no less than 80% of the rated capacity of the electrical output on a minimum of one set of six engines. The dual fuel tests shall be performed at no less than 65% of the rated capacity of the electrical output on a minimum of one set of six engines at two points between 70% and 98% gas fraction on a Btu basis with one point within 4% of the 98% end point. The tests shall be conducted and reported and data reduced as set forth in 9VAC5-50-30. The details of the tests are to be arranged with the Director, Piedmont Regional Office. The facility shall submit a test protocol at least 30 days prior to testing. Two copies of the test results shall be submitted to the Director, Piedmont Regional Office within 60 days after test completion and shall conform to the test report format enclosed with this permit.

(9VAC5-80-110 and Condition 28 of 7/30/2012 Permit)

42. Fuel Burning Equipment Requirements - Concurrently with the performance tests as required in Conditions 39, 40 and 41, the permittee shall determine the moisture content of the treated landfill gas, as sampled, prior to combustion in any of the 48 dual-fuel diesel engines (A1-H6). The moisture content testing shall be conducted in accordance with 40 CFR Part 60, Appendix A, Method 4. Each test shall be reported and data reduced as set forth in 9VAC5-50-30. The details of the test are to be arranged with the Director, Piedmont Regional Office. The permittee shall submit a test protocol at least 30 days prior to testing. Two copies of the test results shall be submitted to the Director, Piedmont Regional Office within 60 days after test completion and shall conform to the test report format enclosed with this permit.

(9VAC5-80-110 and Condition 29 of 7/30/2012 Permit)

43. Fuel Burning Equipment Requirements - Concurrently with the performance tests required in Conditions 39, 40 and 41, Visible Emission Evaluations (VEE) in accordance with 40 CFR Part 60, Appendix A, Method 9, shall also be conducted by the facility on those engines tested. Each test shall consist of 30 sets of 24 consecutive observations (at 15

second intervals) to yield a six minute average. The details of the tests are to be arranged with the Director, Piedmont Regional Office. The facility shall submit a test protocol at least 30 days prior to testing. Should conditions prevent concurrent opacity observations, the Director, Piedmont Regional Office shall be notified in writing, within seven days, and visible emissions testing shall be rescheduled within 30 days. Rescheduled testing shall be conducted under the same conditions (as possible) as the initial performance tests. Two copies of the test result shall be submitted to the Director, Piedmont Regional Office within 60 days after test completion and shall conform to the test report format enclosed with this permit.

(9VAC5-80-110 and Condition 30 of 7/30/2012 Permit)

44. Fuel Burning Equipment Requirements - The performance tests for NO<sub>x</sub> and CO required in Conditions 40 and 41 shall at a minimum be conducted once every five years on all eight stacks and before the Title V operating permit renewal application submittal, starting from the completion date of the testing as required in Conditions 39 and 40. Each testing cycle shall evaluate the performance of a different set of six engines (stack) to ensure the accuracy of the equations in Condition 11. Separate tests shall be performed while operating in single fuel mode using 100% liquid fuel and in dual fuel mode using various quantities of landfill gas and liquid fuel. The single fuel oil test shall be performed at no less than 80% of the rated capacity of the electrical output on a minimum of one set of six engines. The dual fuel tests shall be performed at no less than 65% of the rated capacity of the electrical output on a minimum of one set of six engines at two points between 70% and 98% gas fraction on a Btu basis with one point within 4% of the 98% end point. The tests shall be conducted and reported and data reduced as set forth in 9VAC5-50-30. The details of the tests are to be arranged with the Director, Piedmont Regional Office. The permittee shall submit a test protocol at least 30 days prior to testing. Two copies of the test results shall be submitted to the Director, Piedmont Regional Office within 60 days after test completion and shall conform to the test report format enclosed with this permit.

(9VAC5-80-110 and Condition 32 of 7/30/2012 Permit)

45. Fuel Burning Equipment Requirements - The permitted facility shall be constructed so as to allow for emissions testing and monitoring upon reasonable notice at any time, using appropriate methods. This includes constructing the facility such that volumetric flow rates and pollutant emission rates can be accurately determined by applicable test methods and providing stack or duct that is free from cyclonic flow. Test ports shall be provided when requested at the appropriate locations.

(9VAC5-80-110 and Condition 33 of 7/30/2012 Permit)

## Reporting

46. Fuel Burning Equipment Requirements - The facility shall furnish notification to the Director, Piedmont Regional Office of the date of removal or cessation of operation of the control equipment 30 days prior to such date.

(9VAC5-80-110 and Condition 36 of 7/30/2012 Permit)

47. Fuel Burning Equipment Requirements - The facility shall report each instance that a requirement in Table 2d of 40 CFR 63 Subpart ZZZZ was not met.  
(9VAC5-80-110 and 40 CFR 63.6640(b))
48. Fuel Burning Equipment Requirements - The facility shall submit an annual report to the Director, Piedmont Regional Office meeting the following requirements: Facility engines which combust landfill gas equivalent to 10 percent or more of the gross heat input on an annual basis shall report the fuel flow rate of each fuel and the heating values that were used in facilities' annual calculations, and must demonstrate that the percentage of heat input provided by landfill gas, is equivalent to 10 percent or more of the gross heat input on an annual basis; and the operating limits provided in this permit, and any deviations from these limits; and any problems or errors suspected with the meters along with any corrective action taken. This report may be submitted at the same time as the Annual Compliance Certification submittal required in Condition 60 and be based upon the same time period as the certification.  
(9VAC5-80-110 and 40 CFR 63.6650(a) and (g))
49. Fuel Burning Equipment Requirements - The permittee shall maintain on-site and submit, if requested by the EPA or DEQ, a report containing the following information:
- a. The concentrations of CO in the effluent stream in parts per million, by volume, and oxygen in volume percent, measured at high fire or typical operating load, before and after the tune-up of the boiler (B1).
  - b. A description of any corrective actions taken as a part of the tune-up of the boiler (B1).
  - c. The type and amount of fuel used over the 12 months prior to the tune-up of the boiler (B1), but only if the unit was physically and legally capable of using more than one type of fuel during that period.
- (9VAC5-80-110 and 40 CFR 63.11223(b)(6))
50. Fuel Burning Equipment Requirements - The permittee shall prepare, by March 1 of the year after the calendar year during which a tune-up of the boiler (B1) is complete, and submit to DEQ upon request, a 5-year Compliance Certification Report containing the following information:
- a. Company name and address.
  - b. Statement by a responsible official, with the official's name, title, phone number, email address, and signature, certifying the truth, accuracy and completeness of the notification and a statement of whether the source has complied with all the relevant standards and other requirements of 40 CFR Part 63, Subpart JJJJJ. The notification must include the following certifications of compliance, as applicable, and signed by a responsible official:

- i. “This facility complies with the requirements in §63.11223 to conduct a biennial or 5-year tune-up, as applicable, of each boiler.”
  - ii. For units that do not qualify for a statutory exemption as provided in section 129(g)(1) of the Clean Air Act: “No secondary materials that are solid waste were combusted in any affected unit.”  
(9VAC5-80-110 and 40 CFR 63.11225(b))
51. Fuel Burning Equipment Requirements - If the permittee switches fuels or makes a physical change to the boiler (B1) and the fuel switch or change results in the applicability of a different subcategory within 40 CFR Part 63, Subpart JJJJJ, or in the boiler switching out of Subpart JJJJJ due to a fuel change that results in the boiler meeting the definition of gas-fired boiler, as defined in §63.11237, or the permittee takes a permit limit that results in the boiler becoming subject to the subpart or no longer being subject to the subpart, the permittee must provide notice of the date of the fuel switch, physical change, or permit limit within 30 days of the change. The notification must identify:
- a. The name of the owner or operator of the affected source, the location of the source, the boiler(s) that have switched fuels, were physically changed, or took a permit limit, and the date of the notice.
  - b. The date upon which the fuel switch, physical change, or permit limit occurred.  
(9VAC5-80-110 and 40 CFR 63.11225(g))

### Insignificant Emission Units

52. Insignificant Emission Units - The following emission units at the facility are identified in the application as insignificant emission units under 9VAC5-80-720:

<b>Emission Unit No.</b>	<b>Emission Unit Description</b>	<b>Citation (9VAC_)</b>	<b>Pollutant(s) Emitted (9VAC5-80-720B)</b>
T1 – T4	Four fuel oil storage tanks	5-80-720 B	VOC
T5 & T6	Two lubricating oil storage tanks	5-80-720 B	VOC

These emission units are presumed to be in compliance with all requirements of the federal Clean Air Act as may apply. Based on this presumption, no monitoring, recordkeeping, or reporting shall be required for these emission units in accordance with 9VAC5-80-110.  
(9VAC5-80-110)

### Permit Shield & Inapplicable Requirements

53. Permit Shield & Inapplicable Requirements - Compliance with the provisions of this permit shall be deemed compliance with all applicable requirements in effect as of the permit issuance date as identified in this permit. This permit shield covers only those applicable

requirements covered by terms and conditions in this permit and the following requirements which have been specifically identified as being not applicable to this permitted facility:

<b>Citation</b>	<b>Title of Citation</b>	<b>Description of Applicability</b>
9VAC5-40-880 through 9 VAC 5-40-1050	Emission Standards for Fuel Burning Equipment (Rule 4-8)	Rule 4-8 does not apply to stationary internal combustion engines as stated in 9 VAC 5-40-880.E.
40 CFR Part 60 Subpart IIII	Standards of Performance for Stationary Compression Ignition Internal Combustion Engines	The engines were constructed before the applicability date of July 11, 2005, and have not been modified.
40 CFR Part 64	Compliance Assurance Monitoring	The engines do not use add-on pollution control devices.
40 CFR Part 60 Subpart Kb	Standards of Performance for Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels) for Which Construction, Reconstruction, or Modification Commenced After July 23, 1984	The fuel oil storage tanks store liquids with a maximum true vapor pressure less than 15.0 kPa. The capacity of the lubrication oil tanks is less than the applicable storage capacity of 75 cubic meters.
40 CFR Part 60 Subpart WWW	Standards of Performance for Municipal Solid Waste Landfills That Commenced Construction, Reconstruction, or Modification on or After May 30, 1991, but Before July 18, 2014	The facility is not a municipal solid waste landfill.
40 CFR Part 60 Subpart AAAA	Small Municipal Waste Combustion Units for Which Construction is Commenced After August 30, 1999 or for Which Modification or Reconstruction is Commenced After June 6, 2001	The engines are not municipal waste combustion units as defined in the subpart.
MACT Subpart A - 40 CFR Part 63.6(d), 63.6(e), 63.6(h), 63.7(e)(1), 63.8(a)(4), 63.8(c)(5), 63.9(d), 63.10(b)(2)(i)-(v), 63.10(d)(3), 63.1(e)(2)(ii), 63.10(e)(4), and 63.11	General Provisions	Facility is exempted by complying with MACT Subpart ZZZZ requirements.

Nothing in this permit shield shall alter the provisions of §303 of the federal Clean Air Act, including the authority of the administrator under that section, the liability of the owner for any violation of applicable requirements prior to or at the time of permit issuance, or the ability to obtain information by (i) the administrator pursuant to §114 of the federal Clean Air Act, (ii) the Board pursuant to §10.1-1314 or §10.1-1315 of the Virginia Air Pollution

Control Law or (iii) the Department pursuant to §10.1-1307.3 of the Virginia Air Pollution Control Law.  
(9VAC5-80-110 and 9VAC5-80-140)

## **General Conditions**

54. General Conditions - Federal Enforceability - All terms and conditions in this permit are enforceable by the administrator and citizens under the federal Clean Air Act, except those that have been designated as only state-enforceable.  
(9VAC5-80-110)
55. General Conditions - Permit Expiration
- a. This permit has a fixed term of five years. The expiration date shall be the date five years from the date of issuance. Unless the owner submits a timely and complete application for renewal to the Department consistent with the requirements of 9VAC5-80-80, the right of the facility to operate shall be terminated upon permit expiration.
  - b. The owner shall submit an application for renewal at least six months but no earlier than eighteen months prior to the date of permit expiration.
  - c. If an applicant submits a timely and complete application for an initial permit or renewal under 9VAC5-80-80 F, the failure of the source to have a permit or the operation of the source without a permit shall not be a violation of Article 1, Part II of 9VAC5 Chapter 80, until the Board takes final action on the application under 9VAC5-80-150.
  - d. No source shall operate after the time that it is required to submit a timely and complete application under subsections C and D of 9VAC5-80-80 for a renewal permit, except in compliance with a permit issued under Article 1, Part II of 9VAC5 Chapter 80.
  - e. If an applicant submits a timely and complete application under section 9VAC5-80-80 for a permit renewal but the Board fails to issue or deny the renewal permit before the end of the term of the previous permit, (i) the previous permit shall not expire until the renewal permit has been issued or denied and (ii) all the terms and conditions of the previous permit, including any permit shield granted pursuant to 9VAC5-80-140, shall remain in effect from the date the application is determined to be complete until the renewal permit is issued or denied.
  - f. The protection under subsections F 1 and F 5 (ii) of section 9VAC5-80-80 F shall cease to apply if, subsequent to the completeness determination made pursuant section 9VAC5-80-80 D, the applicant fails to submit by the deadline specified in writing by

the Board any additional information identified as being needed to process the application.  
(9VAC5-80-80, 9VAC5-80-110 and 9VAC5-80-170)

56. General Conditions -Recordkeeping and Reporting - All records of monitoring information maintained to demonstrate compliance with the terms and conditions of this permit shall contain, where applicable, the following:
- a. The date, place as defined in the permit, and time of sampling or measurements;
  - b. The date(s) analyses were performed;
  - c. The company or entity that performed the analyses;
  - d. The analytical techniques or methods used;
  - e. The results of such analyses; and
  - f. The operating conditions existing at the time of sampling or measurement.  
(9VAC5-80-110)
57. General Conditions -Recordkeeping and Reporting - Records of all monitoring data and support information shall be retained for at least five years from the date of the monitoring sample, measurement, report, or application. Support information includes all calibration and maintenance records and all original strip-chart recordings for continuous monitoring instrumentation, and copies of all reports required by the permit.  
(9VAC5-80-110)
58. General Conditions -Recordkeeping and Reporting - The permittee shall submit the results of monitoring contained in any applicable requirement to DEQ no later than March 1 and September 1 of each calendar year. This report must be signed by a responsible official, consistent with 9VAC5-80-80 G, and shall include:
- a. The time period included in the report. The time periods to be addressed are January 1 to June 30 and July 1 to December 31; and
  - b. All deviations from permit requirements. For purpose of this permit, deviations include, but are not limited to:
    - i. Exceedances of emissions limitations or operational restrictions;
    - ii. Excursions from control device operating parameter requirements, as documented by continuous emission monitoring or periodic monitoring, or Compliance Assurance Monitoring (CAM) which indicates an exceedance of emission limitations or operational restrictions; or,

iii. Failure to meet monitoring, recordkeeping, or reporting requirements contained in this permit.

c. If there were no deviations from permit conditions during the time period, the permittee shall include a statement in the report that "no deviations from permit requirements occurred during this semiannual reporting period."

(9VAC5-80-110)

59. General Conditions - Annual Compliance Certification - Exclusive of any reporting required to assure compliance with the terms and conditions of this permit or as part of a schedule of compliance contained in this permit, the permittee shall submit to EPA and DEQ no later than March 1 each calendar year a certification of compliance with all terms and conditions of this permit including emission limitation standards or work practices for the period ending December 31. The compliance certification shall comply with such additional requirements that may be specified pursuant to §114(a)(3) and §504(b) of the federal Clean Air Act. The permittee shall maintain a copy of the certification for five (5) years after submittal of the certification. This certification shall be signed by a responsible official, consistent with 9VAC5-80-80 G, and shall include:

- a. The time period included in the certification. The time period to be addressed is January 1 to December 31;
- b. The identification of each term or condition of the permit that is the basis of the certification;
- c. The compliance status;
- d. Whether compliance was continuous or intermittent, and if not continuous, documentation of each incident of non-compliance;
- e. Consistent with subsection 9VAC5-80-110, the method or methods used for determining the compliance status of the source at the time of certification and over the reporting period;
- f. Such other facts as the permit may require to determine the compliance status of the source; and
- g. One copy of the annual compliance certification shall be submitted to EPA in electronic format only. The certification document should be sent to the following electronic mailing address:

R3\_APD\_Permits@epa.gov

(9VAC5-80-110)

60. General Conditions - Permit Deviation Reporting - The permittee shall notify the Director, Piedmont Regional Office within four daytime business hours after discovery of any deviations from permit requirements which may cause excess emissions for more than one hour, including those attributable to upset conditions as may be defined in this permit. In addition, within 14 days of the discovery, the permittee shall provide a written statement explaining the problem, any corrective actions or preventative measures taken, and the estimated duration of the permit deviation. Owners subject to the requirements of 9VAC5-40-50 C and 9VAC5-50-50 C are not required to provide the written statement prescribed in this paragraph for facilities subject to the monitoring requirements of 9VAC5-40-40 and 9VAC5-50-40. The occurrence should also be reported in the next semiannual compliance monitoring report pursuant to Condition 59 of this permit.  
(9VAC5-80-110 F. 2)
61. General Conditions - Failure/Malfunction Reporting - In the event that any affected facility or related air pollution control equipment fails or malfunctions in such a manner that may cause excess emissions for more than one hour, the owner shall no later than four daytime business hours after the malfunction is discovered, notify the Director, Piedmont Regional Office such failure or malfunction and within 14 days provide a written statement giving all pertinent facts, including the estimated duration of the breakdown. Owners subject to the requirements of 9VAC5-40-50 C and 9VAC5-50-50 C are not required to provide the written statement prescribed in this paragraph for facilities subject to the monitoring requirements of 9VAC5-40-40 and 9VAC5-50-40. When the condition causing the failure or malfunction has been corrected and the equipment is again in operation, the owner shall notify the Director, Piedmont Regional Office.  
(9VAC5-80-110 and 9VAC5-20-180)
62. General Conditions - Severability - The terms of this permit are severable. If any condition, requirement or portion of the permit is held invalid or inapplicable under any circumstance, such invalidity or inapplicability shall not affect or impair the remaining conditions, requirements, or portions of the permit.  
(9VAC5-80-110)
63. General Conditions - Duty to Comply - The permittee shall comply with all terms and conditions of this permit. Any permit noncompliance constitutes a violation of the federal Clean Air Act or the Virginia Air Pollution Control Law or both and is ground for enforcement action; for permit termination, revocation and reissuance, or modification; or, for denial of a permit renewal application.  
(9VAC5-80-110)
64. General Conditions - Need to Halt or Reduce Activity not a Defense - It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.  
(9VAC5-80-110)

65. General Conditions - Permit Modification - A physical change in, or change in the method of operation of, this stationary source may be subject to permitting under State Regulations 9VAC5-80-50, 9VAC5-80-1100, 9VAC5-80-1605, or 9VAC5-80-2000 and may require a permit modification and/or revisions except as may be authorized in any approved alternative operating scenarios.  
(9VAC80-110, 9VAC5-80-190, and 9VAC5-80-260)
66. General Conditions - Property Rights - The permit does not convey any property rights of any sort, or any exclusive privilege.  
(9VAC5-80-110)
67. General Conditions - Duty to Submit Information - The permittee shall furnish to the Board, within a reasonable time, any information that the Board may request in writing to determine whether cause exists for modifying, revoking and reissuing, or terminating the permit or to determine compliance with the permit. Upon request, the permittee shall also furnish to the Board copies of records required to be kept by the permit and, for information claimed to be confidential, the permittee shall furnish such records to the Board along with a claim of confidentiality.  
(9VAC5-80-110)
68. General Conditions - Duty to Submit Information - Any document (including reports) required in a permit condition to be submitted to the Board shall contain a certification by a responsible official that meets the requirements of 9VAC5-80-80 G.  
(9VAC5-80-110)
69. General Conditions - Duty to Pay Permit Fees - The owner of any source for which a permit was issued under 9VAC5-80-50 through 9VAC5-80-300 shall pay annual emissions fees, as applicable, consistent with the requirements of 9VAC5-80-310 through 9VAC5-80-350 and annual maintenance fees, as applicable, consistent with the requirements of 9VAC5-80-2310 through 9VAC5-80-2350.  
(9VAC5-80-110, 9VAC5-80-310 et seq., and 9VAC5-80-2310 et seq.)
70. General Conditions - Fugitive Dust Emission Standards - During the operation of a stationary source or any other building, structure, facility, or installation, no owner or other person shall cause or permit any materials or property to be handled, transported, stored, used, constructed, altered, repaired, or demolished without taking reasonable precautions to prevent particulate matter from becoming airborne. Such reasonable precautions may include, but are not limited to, the following:
  - a. Use, where possible, of water or chemicals for control of dust in the demolition of existing buildings or structures, construction operations, the grading of roads, or the clearing of land;

- b. Application of asphalt, water, or suitable chemicals on dirt roads, materials stockpiles, and other surfaces which may create airborne dust; the paving of roadways and the maintaining of them in a clean condition;
  - c. Installation and use of hoods, fans, and fabric filters to enclose and vent the handling of dusty material. Adequate containment methods shall be employed during sandblasting or similar operations;
  - d. Open equipment for conveying or transporting material likely to create objectionable air pollution when airborne shall be covered or treated in an equally effective manner at all times when in motion; and,
  - e. The prompt removal of spilled or tracked dirt or other materials from paved streets and of dried sediments resulting from soil erosion.  
(9VAC5-80-110 and 9VAC5-50-90)
71. General Conditions - Startup, Shutdown, and Malfunction - At all times, including periods of startup, shutdown, and soot blowing, and malfunction, owners shall, to the extent practicable, maintain and operate any affected facility including associated air pollution control equipment in a manner consistent with air pollution control practices for minimizing emissions. Determination of whether acceptable operating and maintenance procedures are being used will be based on information available to the Board, which may include, but is not limited to, monitoring results, opacity observations, review of operating and maintenance procedures, and inspection of the source.  
(9VAC5-80-110, 9VAC5-50-20 E and 40 CFR 63.6605(b))
72. General Conditions - Alternative Operating Scenarios - Contemporaneously with making a change between reasonably anticipated operating scenarios identified in this permit, the permittee shall record in a log at the permitted facility a record of the scenario under which it is operating. The permit shield described in 9VAC5-80-140 shall extend to all terms and conditions under each such operating scenario. The terms and conditions of each such alternative scenario shall meet all applicable requirements including the requirements of 9VAC5 Chapter 80, Article 1.  
(9VAC5-80-110)
73. General Conditions - Inspection and Entry Requirements - The permittee shall allow DEQ, upon presentation of credentials and other documents as may be required by law, to perform the following:
- a. Enter upon the premises where the source is located or emissions-related activity is conducted, or where records must be kept under the terms and conditions of the permit.
  - b. Have access to and copy, at reasonable times, any records that must be kept under the terms and conditions of the permit.

- c. Inspect at reasonable times any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under the permit.
  - d. Sample or monitor at reasonable times' substances or parameters for the purpose of assuring compliance with the permit or applicable requirements.  
(9VAC5-80-110)
74. General Conditions - Reopening for Cause - The permit shall be reopened by the Board if additional federal requirements become applicable to a major source with a remaining permit term of three years or more. Such reopening shall be completed no later than 18 months after promulgation of the applicable requirement. No such reopening is required if the effective date of the requirement is later than the date on which the permit is due to expire, unless the original permit or any of its terms and conditions has been extended pursuant to 9VAC5-80-80 F. The conditions for reopening a permit are as follows:
- a. The permit shall be reopened if the Board or the administrator determines that the permit contains a material mistake or that inaccurate statements were made in establishing the emissions standards or other terms or conditions of the permit.
  - b. The permit shall be reopened if the administrator or the Board determines that the permit must be revised or revoked to assure compliance with the applicable requirements.
  - c. The permit shall not be reopened by the Board if additional applicable state requirements become applicable to a major source prior to the expiration date established under 9VAC5-80-110 D.  
(9VAC5-80-110)
75. General Conditions - Permit Availability - Within five days after receipt of the issued permit, the permittee shall maintain the permit on the premises for which the permit has been issued and shall make the permit immediately available to DEQ upon request.  
(9VAC5-80-110 and 9VAC5-80-150)
76. General Conditions - Transfer of Permits
- a. No person shall transfer a permit from one location to another, unless authorized under 9VAC5-80-130, or from one piece of equipment to another.
  - b. In the case of a transfer of ownership of a stationary source, the new owner shall comply with any current permit issued to the previous owner. The new owner shall notify the Board of the change in ownership within 30 days of the transfer and shall comply with the requirements of 9VAC5-80-200.

- c. In the case of a name change of a stationary source, the owner shall comply with any current permit issued under the previous source name. The owner shall notify the Board of the change in source name within 30 days of the name change and shall comply with the requirements of 9VAC5-80-200.  
(9VAC5-80-110 and 9VAC5-80-160)
- 77. General Conditions - Permit Revocation or Termination for Cause - A permit may be revoked or terminated prior to its expiration date if the owner knowingly makes material misstatements in the permit application or any amendments thereto or if the permittee violates, fails, neglects or refuses to comply with the terms or conditions of the permit, any applicable requirements, or the applicable provisions of 9VAC5 Chapter 80 Article 1. The Board may suspend, under such conditions and for such period of time as the Board may prescribe any permit for any grounds for revocation or termination or for any other violations of these regulations.  
(9VAC5-80-110, 9VAC5-80-190 C and 9VAC5-80-260)
- 78. General Conditions - Duty to Supplement or Correct Application - Any applicant who fails to submit any relevant facts or who has submitted incorrect information in a permit application shall, upon becoming aware of such failure or incorrect submittal, promptly submit such supplementary facts or corrections. An applicant shall also provide additional information as necessary to address any requirements that become applicable to the source after the date a complete application was filed but prior to release of a draft permit.  
(9VAC5-80-110 and 9VAC5-80-80 E)
- 79. General Conditions - Stratospheric Ozone Protection - If the permittee handles or emits one or more Class I or II substances subject to a standard promulgated under or established by Title VI (Stratospheric Ozone Protection) of the federal Clean Air Act, the permittee shall comply with all applicable sections of 40 CFR Part 82, Subparts A to F.  
(9VAC5-80-110 and 40 CFR Part 82)
- 80. General Conditions - Asbestos Requirements - The permittee shall comply with the requirements of National Emissions Standards for Hazardous Air Pollutants (40 CFR 61) Subpart M, National Emission Standards for Asbestos as it applies to the following: Standards for Demolition and Renovation (40 CFR 61.145), Standards for Insulating Materials (40 CFR 61.148), and Standards for Waste Disposal (40 CFR 61.150).  
(9VAC5-60-70 and 9VAC5-80-110)
- 81. General Conditions - Accidental Release Prevention - If the permittee has more, or will have more than a threshold quantity of a regulated substance in a process, as determined by 40 CFR 68.115, the permittee shall comply with the requirements of 40 CFR Part 68.  
(9VAC5-80-110 and 40 CFR Part 68)
- 82. General Conditions - Changes to Permits for Emissions Trading - No permit revision shall be required under any federally approved economic incentives, marketable permits,

emissions trading and other similar programs or processes for changes that are provided for in this permit.

(9VAC5-80-110)

83. General Conditions - Emissions Trading - Where the trading of emissions increases and decreases within the permitted facility is to occur within the context of this permit and to the extent that the regulations provide for trading such increases and decreases without a case-by-case approval of each emissions trade:
- a. All terms and conditions required under 9VAC5-80-110, except subsection N, shall be included to determine compliance.
  - b. The permit shield described in 9VAC5-80-140 shall extend to all terms and conditions that allow such increases and decreases in emissions.
  - c. The owner shall meet all applicable requirements including the requirements of 9VAC5-80-50 through 9VAC5-80-300.
- (9VAC5-80-110)

## **SOURCE TESTING REPORT FORMAT**

### Report Cover

1. Plant name and location
2. Units tested at source (indicate Ref. No. used by source in permit or registration)
3. Test Dates.
4. Tester; name, address and report date

### Certification

1. Signed by team leader/certified observer (include certification date)
2. Signed by responsible company official
3. \*Signed by reviewer

### Copy of approved test protocol

### Summary

1. Reason for testing
2. Test dates
3. Identification of unit tested & the maximum rated capacity
4. \*For each emission unit, a table showing:
  - a. Operating rate
  - b. Test Methods
  - c. Pollutants tested
  - d. Test results for each run and the run average
  - e. Pollutant standard or limit
5. Summarized process and control equipment data for each run and the average, as required by the test protocol
6. A statement that test was conducted in accordance with the test protocol or identification & discussion of deviations, including the likely impact on results
7. Any other important information

### Source Operation

1. Description of process and control devices
2. Process and control equipment flow diagram
3. Sampling port location and dimensioned cross section Attached protocol includes: sketch of stack (elevation view) showing sampling port locations, upstream and downstream flow disturbances and their distances from ports; and a sketch of stack (plan view) showing sampling ports, ducts entering the stack and stack diameter or dimensions

### Test Results

1. Detailed test results for each run
2. \*Sample calculations
3. \*Description of collected samples, to include audits when applicable

### Appendix

1. \*Raw production data
2. \*Raw field data
3. \*Laboratory reports
4. \*Chain of custody records for lab samples
5. \*Calibration procedures and results
6. Project participants and titles
7. Observers' names (industry and agency)
8. Related correspondence
9. Standard procedures

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\* Not applicable to visible emission evaluations